I hold Amateur Radio license AB1AV, and I am concerned about the effects BPL will have on Amateur and other use of the HF band. I regularly use this band with low power transmitters and sensitive receivers. Among other activities, I regulary participate in regional traffic nets covering Maine, New Hampshire, and Vermont, using the 3.5 MHz band. These are the nets that provide communication when other methods fail. Most often I use a transmit power of 2 watts into a simple wire dipole antenna. This allows my radio station to operate for a long time from a small battery, or indefinitly with a small solar cell, so it can easily be carried, even on foot, to any place communication is needed. Such low power communications will become impossible if those who must hear my signal are surrounded by BPL installations like those currently undergoing trials.

The comments of Electric Broadband suggest that interference caused by BPL can somehow be mitigated by changes to receivers that suffer, and that the Commission should regulate "emissions ... receivers have to be able to tolerate." This might be appropriate if a receiver were suffering overload from emissions outside the band to which the receiver is tuned, but the interference caused by BPL is directly on the frequencies allocated to licensed services, so that correctly-designed receivers will respond to the interference. Therefore, receiver regulation cannot resolve BPL interference.

Most of the comments from the utility industry address ways to measure BPL emissions to comply with the field strength limits specified in Part 15, and many of them point out that BPL is different from the devices contemplated when Part 15 rules were written. Indeed they are! Usual Part 15 devices are localized, or use a single frequency, or operate only intermittently. Most often all three attributes hold, so that even if a device does cause interference to a licensed service, the licensed user can avoid the problem by moving, by tuning to a different frequency, or by waiting briefly. But BPL systems extend for miles, and necessarily cover a broad swath of the HF band in order to offer useful bandwidth to their users. And the goal of any network operator is to keep the network in use continuously. Therefore, any interference caused by BPL must be considered "harmful interference," in the Commission's terms. Because of these differences from previous Part 15 devices, the regulations should be different.

The Commission has pledged to protect licensed services from harmful interference caused by BPL. One protection is section 15.5, which prohibits operation of any Part 15 device that causes harmful interference. Many of the utility industry comments neglect this rule, and seem to imply that all a BPL installation must do is show that it complies with certain emissions limits -- either those in the current rules, or higher limits proposed by the comment authors. But this misses the point entirely! A BPL installation that complies with the emissions limits, but still causes harmful interference, cannot be operated, and is a wasted investment. Tests show that this is not merely a theoretical possibility, but rather is highly likely. Therefore,

because BPL installations are so different from existing Part 15 devices, the Commission should establish lower emissions limits. These limits should be set low enough that a BPL installation complying with them is unlikely to cause harmful interference to licensed services. The limits should be set in cooperation with licensed users of the HF band, including the ARRL, and should consider issues such as proximity of antennas to the power lines, receiver sensitivity, and level of typical desired signals at the receiver. Such limits will reduce the risk that a BPL installation must be shut down because it is found to cause harmful interference.

Respectfully submitted,
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